

20030301.qrp v02_n846.qrl.20030301

Date: Sat, 1 Mar 2003 19:03:05 EST
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 2846

QRP-L Digest 2846

Topics covered in this issue include:

- 1) [146836] Re: VX0 pulling
by Pete Burbank <plburbank@earthlink.net>
- 2) [146837] Re: Lobstercon 2003 ?
by "sslyon" <sslyon@megalink.net>
- 3) [146838] Re: matching dipoles and ladder line
by "sslyon" <sslyon@megalink.net>
- 4) [146839] matching dipoles and ladder line
by "KL7FDQ, Wayne Leman" <KL7FDQ@rangeweb.net>
- 5) [146840] matching dipoles and ladder line
by "KL7FDQ, Wayne Leman" <KL7FDQ@rangeweb.net>
- 6) [146841] RE: Preliminary Log K5DI
by "George, W5YR" <w5yr@att.net>
- 7) [146842] SOLD! - DO OVER ! - FS: Various Ten-Tec accessories
by "Dave Redfearn" <n4elm@attbi.com>
- 8) [146843] the qso kid!
by sergio <sergio@village-buzz.com>
- 9) [146844] FS
by <mgoins@usa.net>
- 10) [146845] Re: OT - Operation Support
by Terry Bassett <mutabut@net66.com>
- 11) [146846] Items sold
by John Farler <jfarler@peoplepc.com>
- 12) [146847] Re: VX0 pulling
by Dan Tayloe <dtayloe@cox.net>
- 13) [146848] Re: Fwd: QRP-L moderation
by Bill Stietenroth <k5zty@juno.com>
- 14) [146849] Re: matching dipoles and ladder line
by "Thomas Kuehl" <ac7a@earthlink.net>
- 15) [146850] Re: OT: AEA KT-1 Keyer - Need Info.
by "cal.jsi" <cal.jsi@verizon.net>
- 16) [146851] FOX: W8RU Preliminary Log
by Ron Majewski <bigsky2000@sbcglobal.net>
- 17) [146852] FOX: Apology
by "Dave WR50" <dendav@dzn.com>
- 18) [146853] Transistor Cross Reference
by "Dan Reynolds" <bcdlr@insightbb.com>
- 19) [146854] Re: Transistor Cross Reference

- by "Ian Wilson" <ianmwilson@earthlink.net>
- 20) [146855] Re: Ant/Rig switching--2 antenna switches in SERIES..
by ve3ab@mail.mondenet.com
- 21) [146856] Re: Need Info On Iomega Power Supply
by Tim Groat <tcgroat@earthlink.net>
- 22) [146857] Re: Transistor Cross Reference
by David Hinerman <WD8CIV@worldnet.att.net>
- 23) [146858] Re: the qso kid!
by Ed Tanton <n4xy@earthlink.net>
- 24) [146859] Re: Transistor Cross Reference
by Ted Buckley <tedb@aracnet.com>
- 25) [146860] Re: Transistor Cross Reference
by "E. Roswell" <eroswell@monmouth.com>
- 26) [146861] TINY-TORNADO REV2d PCB *** NOW AVAILABLE ***
by "Brice D. Hornback" <bdh@cyberbound.net>
- 27) [146862] Re: Ant/Rig switching--2 antenna switches in SERIES..
by Larry - WA2DGD <wa2dgd@comcast.net>
- 28) [146863] Re: Transistor Cross Reference
by Ed Tanton <n4xy@earthlink.net>
- 29) [146864] Re: Transistor Cross Reference
by "Ray Goff" <radioham@gmx.co.uk>
- 30) [146865] Re: matching dipoles and ladder line
by "James R. Duffey" <JamesDuffey@comcast.net>
- 31) [146866] Re: Transistor Cross Reference
by "John J. McDonough" <wb8rcr@arrl.net>
- 32) [146867] How to Use Ceramic Resonator
by k4vib@att.net
- 33) [146868] FS Bencher Paddles
by "bob baxter" <rbaxter@cybertrails.com>
- 34) [146869] Re: How to Use Ceramic Resonator
by "Leon Heller" <leon_heller@hotmail.com>
- 35) [146870] HB - DIP pads for Manhattan
by James R Giammanco <n5ib@juno.com>
- 36) [146871] Re: How to Use Ceramic Resonator
by Ed Tanton <n4xy@earthlink.net>
- 37) [146872] twclock and twlog
by T + J Williams <wa0eir@comcast.net>
- 38) [146873] Re; FS Bencher paddes
by "bob baxter" <rbaxter@cybertrails.com>
- 39) [146874] Re: How to Use Ceramic Resonator
by Steven Weber <kd1jv@moose.ncia.net>
- 40) [146875] For Sale
by Wayne Rogers <w5kdj@juno.com>
- 41) [146876] RE: matching dipoles and ladder line
by Nick Kennedy <nkennedy@tcainternet.com>
- 42) [146877] Address for Rich Arland - K7SZ
by "Kenneth Evans" <w4du@attbi.com>
- 43) [146878] RF Coaxial Grounding Scheme ?

by "Michael Melland" <w9wis@charter.net>
44) [146879] Re: Transistor Cross Reference
by "E. Roswell" <eroswell@monmouth.com>

Date: Fri, 28 Feb 2003 17:27:17 -0500
From: Pete Burbank <plburbank@earthlink.net>
To: ianmwilson@earthlink.net,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [146836] Re: VX0 pulling
Message-ID: <5.2.0.9.0.20030228172211.00a30110@Earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 03:04 PM 2/28/2003, Ian Wilson wrote:

>As part of an endless quest for a simple, stable, 6m monitor, I am
>attempting to generate 50.125MHz using a couple
>of xtal-controlled oscillators, a multiplier, mixer and bandpass
>filter. It all works FB except that *both* xtal controlled
>oscillators are operating above the figure marked on the case. One xtal
>is 6.25MHz, the other 18.867MHz. The
>active part of each oscillator is a 74HC inverting gate (1/4 74HC86), 1M
>feedback from output to input, 2.2k from
>the output of the gate to a pi network - 15pf to ground, xtal, 15pf to
>ground and then to the input of the gate.

SNIP

FWIW I recall reading in the ARRL handbook that HC-6 xtals are the easiest
to pull. I think it was the '85 HB
and it did indeed pull down easily.

73

Pete NV4V

Date: Fri, 28 Feb 2003 17:48:10 -0500
From: "sslyon" <sslyon@megalink.net>
To: <ve2hac@hotmail.com>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [146837] Re: Lobstercon 2003 ?
Message-ID: <000f01c2df7b\$788be240\$0ac8e742@megalink.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

You're absolutely right Max... Atlanticon is just the time to start planning Lobstercon! You're so much more organized than we are down here... snow must be really deep up there, eh? So, by these notes, we will:

- a.) Wake up REX from his hibernation, to start phase 1 "planification"
- b.) Nudge our RockMite Creator, for an '03 Lobstercon Bensonator
- c.) Brainstorm what we all could bring -to help ol' Rex do the thing!

72/73

AA1MY

Seabury & Sharon Lyon
99 Sparrowhawk Mtn Rd
Bethel ME, 04217 U.S.A.
207-836-2576

Virus Protection by Norton and ZoneAlarm

----- Original Message -----

From: "Maxime Prati" <ve2hac@hotmail.com>

To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Sent: Friday, February 28, 2003 4:05 PM

Subject: Lobstercon 2003 ?

> Aloha !

>

> Any infos on this event for this year ?

>

> Looking forward to do some planification for

> the summer holidays !!!

>

> 72 de VE2HAC

> Max

Date: Fri, 28 Feb 2003 17:56:48 -0500

From: "sslyon" <sslyon@megalink.net>

To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>

Subject: [146838] Re: matching dipoles and ladder line

Message-ID: <001701c2df7c\$acf87ce0\$0ac8e742@megalink.net>

MIME-Version: 1.0

Content-Type: text/plain;

charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Check out W6RCA's web page for a surprisingly simple, "tuner-less method".
Otherwise, check out the ZM-2 or BLT tuners, which are very efficient and

economical.

What's the difference between Poughkeepsie? (W.C. Fields)

73

AA1MY

Seabury & Sharon Lyon
99 Sparrowhawk Mtn Rd
Bethel ME, 04217 U.S.A.
207-836-2576

Date: Fri, 28 Feb 2003 16:02:00 -0700
From: "KL7FDQ, Wayne Leman" <KL7FDQ@rangeweb.net>
To: "Low Power Amateur Radio Discussion" <grp-l@lehigh.edu>
Subject: [146839] matching dipoles and ladder line
Message-ID: <000e01c2df7d\$89170b10\$023d1dac@waynecomputer>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

This is exactly the antenna system I am using, just as Karl describes it, 88 feet on each leg, with an old antenna tuner. I am able to tune up fine on all the bands Karl mentioned, 80-10. I have only one rig, a Yaesu FT-817, max of 5 watts output, and since I got back on the air last November I have made many contacts, including to quite a few different countries, and some enjoyable rag chews. My antenna is only 15 high. Many hams would be delighted if they could get the center of their wire antennas as high as 40 feet. 6 feet on the ends will work just fine. Now, get on the air and have fun. Your antenna will give you a lot of contacts. You won't get out as well as if you had a 6-element Yagi at 150 feet, but you will get out very well with a dipole like this.

73,

Wayne

Wayne Leman
KL7FDQ QRP ARCI #4454
Busby, Montana Grid: DN65nm

<http://www.qsl.net/k17fdq/>

>
> Hi Nick, you have a lot of data but most of it doesn't matter. Rather
> than try to show you how to use your data, let me say that if you can
> make your inverted V 88 feet long, and feed it with 450 ohm ladderline
> to any of the MFJ or other good balanced line tuners, you can use this
> antenna with really good success on 80,40,30,20,17,15,12 and 10 meters.
>
>
> On Fri, 28 Feb 2003, Nick Foster wrote:
>
> > Well, I've gotten myself seriously flummoxed over my antenna setup here,
> and
> > I was hoping some resident RF guru could help me out. Here's what I've
> got:
> > any or all of this could be entirely wrong, so feel free to shoot down
> any
> > misconceptions I have.
> >
> > I set up an inverted "V" last weekend for 40m and fed it with ladder
> line
> > (since it's light and cheap). It's not exactly the ideal Hertzian
> dipole:
> > it's about 40 feet off the ground in the center, and the ends come
> within
> > six feet of the (also non-ideal) ground. At resonance, assuming I trim
> the
> > thing properly, EZNEC says I ought to see about 32 ohms of resistive
> > impedance. Okay, you say, that'll do.
> >
> > The problem is that I used ladder line, and not coax, so I've got a
> massive
> > built-in impedance mismatch at the feedline-antenna junction: about
> 10:1, as
> > I match 300-ohm ladder line to 32 ohm antenna. This isn't such a
> problem,
> > really, since the ladder line is so low-loss that, assuming I use a
> tuner,
> > almost all the RF is eventually going to get to the antenna, whether
> it's on
> > the first trip down the line or the fiftieth.
> >
> > However, this mismatch creates huge standing waves on my line, which
> means
> > that the feedline length becomes oh-so-critical in determining feedpoint
> > impedance. This all becomes relevant when you take into account the

feedline

> > length that I'm using now: right around 80 degrees of phase at 7.040MHz.
> > This puts my feedpoint impedance, according to HAMCALC, at around
1200+j1400
> > ohms. Ick.
> >
> > So, I want to build a tuner specifically designed for this setup and
this
> > frequency, with the least loss possible. Multi-band operation doesn't
really
> > concern me. Am I going to have to alter my feedline length for a lower
> > impedance, or will it matter at all to the tuner? And what tuner
> > architecture do you recommend? Will I need a 4:1 balun? Will the Cubs
ever
> > win the Series? What is the meaning of life?
> >
> > Help!
> >
> >
> > Nick
> > N1UBZ

Date: Fri, 28 Feb 2003 16:05:30 -0700
From: "KL7FDQ, Wayne Leman" <KL7FDQ@rangeweb.net>
To: <qrp-l@lehigh.edu>
Subject: [146840] matching dipoles and ladder line
Message-ID: <002301c2df7d\$ed5e9520\$023d1dac@waynecomputer>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Whoops, I think I read Karl's message too quickly. My dipole is 88 feet on
each leg, but a total length of 44 feet on each leg will tune up as well.

Wayne
KL7FDQ

> This is exactly the antenna system I am using, just as Karl describes it,
88
> feet
> on each leg, with an old antenna tuner. I am able to tune up fine on all
the

> bands
> Karl mentioned, 80-10. I have only one rig, a Yaesu FT-817, max of 5 watts
> output,
> and since I got back on the air last November I have made many contacts,
> including
> to quite a few different countries, and some enjoyable rag chews.
> My antenna is only 15 high. Many hams would be delighted if they could get
> the
> center of their wire antennas as high as 40 feet. 6 feet on the ends will
> work just
> fine. Now, get on the air and have fun. Your antenna will give you a lot
of
> contacts. You won't get out as well as if you had a 6-element Yagi at 150
> feet, but
> you will get out very well with a dipole like this.
>
> 73,
> Wayne
> -----
> Wayne Leman
> KL7FDQ QRP ARCI #4454
> Busby, Montana Grid: DN65nm
> <http://www.qsl.net/kl7fdq/>
>
>
> >
> > Hi Nick, you have a lot of data but most of it doesn't matter. Rather
> > than try to show you how to use your data, let me say that if you can
> > make your inverted V 88 feet long, and feed it with 450 ohm ladderline
> > to any of the MFJ or other good balanced line tuners, you can use this
> > antenna with really good success on 80,40,30,20,17,15,12 and 10 meters.

Date: Fri, 28 Feb 2003 17:12:00 -0600
From: "George, W5YR" <w5yr@att.net>
To: <k5di@zianet.com>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [146841] RE: Preliminary Log K5DI
Message-ID: <IGEMKCEKDDMKFONPPFHBEEEMKDCAA.w5yr@att.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="us-ascii"
Content-Transfer-Encoding: 7bit

Hi, Karl

Good going, OM! All of us were very pleased and surprised at what a loud signal you put in here all evening long. You must be feeding that 817 the right stuff.

As unofficial score-watcher for the NE-TX Tornados, I should point out that the 0218 contact contains a typo: it is K5JHP instead of W5JHP. You acknowledged him correctly on the air at the time so I am sure that this is just a typing mixup.

Three of the Tornados were proud to be your first contacts in a row last evening. Bill K5JHP started with Ron and came along at 0218 as did Chuck W5USJ at 0235 for another Clean Sweep, thanks to you and your efforts.

73/72, George

Amateur Radio W5YR - the Yellow Rose of Texas

Fairview, TX 30 mi NE of Dallas in Collin county EM13QE

"In the 57th year and it just keeps getting better!"

-----Original Message-----

From: owner-qrp-1@Lehigh.EDU [mailto:owner-qrp-1@Lehigh.EDU] On Behalf Of Karl F. Larsen

Sent: Friday, February 28, 2003 2:53 PM

To: Low Power Amateur Radio Discussion

Subject: FOX: Preliminary Log K5DI

Here is the paper log transfered to something I can put on a message. If you see any errors please let me know.

Time	Call	RST	State	Name	Power	
0201	K5DW	559	TX	Don	5W	
0203	W5TB	559	TX	Doc	5W	
0205	W5YR	559	TX	George	5W	
0218	W5JHP	559	TX	Bill	5W	*problem* should be K5JHP
0235	W5USJ	559	TX	Chuck	5W	

Date: Fri, 28 Feb 2003 17:25:25 -0600

From: "Dave Redfearn" <n4elm@attbi.com>
To: "Low Power Amateur Radio Discussion \ (E-mail\)" <qrp-1@lehigh.edu>,
"Ten-Tec Mail list \ (E-mail\)" <tentec@contesting.com>
Subject: [146842] SOLD! - DO OVER ! - FS: Various Ten-Tec accessories
Message-ID: <000301c2df80\$ac8ffa40\$016fa8c0@Pavillion>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

The entire lot of Ten-Tec Stuff has been spoken for.

Thanks for the response, I wish I had more.

73 - Dave

=====
Dave Redfearn, ARS N4ELM, McKinney, TX
Email: n4elm@NOJUNKattbi.com (to reply, remove NOJUNK)
QRL? de N4ELM/qrp

Date: Fri, 28 Feb 2003 18:36:54 -0500
From: sergio <sergio@village-buzz.com>
To: qrp-1@Lehigh.EDU
Subject: [146843] the qso kid!
Message-ID: <5.1.1.6.0.20030228183426.021dc528@mail.neobright.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

i pulled that wire antenna out the window, and all around my house... it goes from the window, up to the rain gutter, and around two corners, and past the kitchen..

i turned on, tuned up, and heard nc2b calling cq..

i called back, and he heard me!

we talked for a bit, then the wife came home.. and we had to head out..

but i GOT IT!

woo hoo..

just to let you guys know, you're all next!

thanks for all the counterpoise help!

peace,

sergio

www.village-buzz.com - "the village buzz"

www.mp3.com/village_buzz - "the rock n roll, baby!"

www.coffee-black.com - rock photo!

phone ... 419 606 0557

to subscribe to The Village Buzz, send a blank email to:

VB-Announce-subscribe@yahoogroups.com

www.amazon.com/o/registry/3L7DM7FMR50QU <- buy me some swag!

Date: Fri, 28 Feb 2003 19:06:15 -0500

From: <mgoins@usa.net>

To: <qrp-1@lehigh.edu>

Subject: [146844] FS

Message-ID: <285HcaagP6944S17.1046477175@uwdvg017.cms.usa.net>

Mime-Version: 1.0

Content-Type: text/plain; charset=ISO-8859-1

Content-Transfer-Encoding: quoted-printable

For Sale: OHR QRP Spirit for 20 meters in like new condition. Works great=, but haven't used it in a while because of the FT-817. Has RIT, built in keyer=2E =

\$110.00 shipped

Kenwood 440. Good condition. Used here at only 1 watt, but regular power output. CW filter. Hand mike. Factory double box (fair shape). Manual. \$4=25 shipped

Pyramid 25 amp power supply. twin meters. Used with the 440 and to power = the station (pre=3Dsolar power). Will not sell before the 440. \$100 shipped

Please reply direct. Thanks.

=

mike
wb5yjx
QRP-ARCI 3922 (former managing editor, QRP Quarterly), =

SOC 54, Flying Pig 447, QRP-L 2130, Adventure Radio 810, Alaska QRP 514, =
QCWA
30857

Date: Fri, 28 Feb 2003 19:18:18 -0600
From: Terry Bassett <mutabut@net66.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [146845] Re: OT - Operation Support
Message-ID: <200302281918.19101.mutabut@net66.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit
Content-Disposition: inline

On Friday 28 February 2003 06:15, Leon Heller wrote:

> "pre moistened towelettes" for soldiers! You wouldn't catch British troops
> using such namby-pamby luxuries.
>
> 73, Leon

Actually, the pre-moistened towelettes are perfect for cooling off when you
can't get to the showers any time soon and the heat is on. The alcohol
evaporates on your skin and gives a moments respite from the heat of day.

73,

Terry KA9TXE

Date: Fri, 28 Feb 2003 21:12:32 -0500
From: John Farler <jfarler@peoplepc.com>
To: qrp-l <qrp-l@Lehigh.EDU>
Subject: [146846] Items sold
Message-ID: <3E601710.62257639@peoplepc.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

All the items below have been spoken for. Thanks for all the interest.

73, John, K4AVX

> I have several items excess to my needs.
>
> 1. MFJ Deluxe Noise Cancelling Signal Enhancer Model
> MFJ 1026, with manual. Uses 12 volts from station
> supply. Goes into antenna line before xmtr to phase
> out local noise. Sold for \$179, will ship in US for
> \$75.
>
> 2. Kantronics Packet Communicator Model 9612 (does 9600
> and 1200 baud VHF packet at the same time) Has ROM
> and pager upgrade, with manuals. \$100 shipped in US.
>
> 3. MFJ Cub 15 Meter QRP transceiver Model 9315 with both
> assembly and operating manuals. Seems to work OK,
> have made several contacts. The only change from
> original is a bnc connector for the antenna, and the
> hole was already provided. \$55 shipped in US.
>
> 4. Yaesu Vinyl case for FT-817 Transceiver. Only slipped
> onto radio for one day. Did not suit my mode of using
> the radio. Only change to original is that the hole
> outline for the CW key Plug is punched out to allow
> connector to be inserted. \$17 shipped in US.
>
> Cash, Check or money order accepted. Will ship by USPS.
> Otherwise you pay extra for UPS. Please confirm by
> email to jfarler@peoplepc.com.
>
> Thanks,73,
>
> John Farler
> K4AVX

Date: Fri, 28 Feb 2003 19:36:42 -0700
From: Dan Tayloe <dtayloe@cox.net>
To: ianmwilson@earthlink.net
Cc: qrp-l@Lehigh.EDU
Subject: [146847] Re: VX0 pulling
Message-ID: <3E601CBA.5151BBA3@cox.net>
MIME-Version: 1.0

Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I have tried making a VXO out of a TTL crystal osc circuit and have never had any luck. It does not mean it cannot be done, but I have given it several unsuccessful tries. A small frequency shift is all I ever got.

You could always use a normal transistor VXO, then square up the waveform using the same input circuit as the SSS frequency counter on the Az ScQRPion webpage and then do your digital mixing (I presume that is what you are doing).

- Dan, N7VE

Date: Fri, 28 Feb 2003 18:03:31 -0600
From: Bill Stietenroth <k5zty@juno.com>
To: JClinton46@aol.com
Cc: qrp-l@Lehigh.EDU
Subject: [146848] Re: Fwd: QRP-L moderation
Message-ID: <20030228.211937.-1493487.0.k5zty@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I don't care if the posts come a little slowly. We aren't handling emergency traffic here. The lack of garbage in the content is worth whatever small inconvenience is perceived by the lack of speed. This list has been a pleasure to read since the moderation started. There will always be malcontents who want to screw things up for others and any completely open reflector is doomed to be taken over by those people because civil people won't stay around and listen to that garbage. A big thanks to Mr Eschleman for taking control

Bill, K5ZTY
Houston, TX

Date: Fri, 28 Feb 2003 20:21:09 -0700
From: "Thomas Kuehl" <ac7a@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [146849] Re: matching dipoles and ladder line
Message-ID: <005201c2dfa1\$9ac8ba10\$0a0110ac@texas6oef4glwm>
MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Nick,

There are numerous ways to go about resolving your impedance matching issue. The 1/4 wavelength transmission line has transformed your low impedance to a high value. Adding another 1/4 wavelength (90-degrees) of line should result in an impedance near that at the antenna feed-point. As I recall, you weren't too far from 50-ohms. That impedance, or one achieved by adding another 1/8 wavelength (45-degrees) of line, will provide an impedance that should be easily matched with a tuner.

If you are interested in maximizing tuner efficiency use an L-match; instead of the commonly employed T-match. The L-match is comprised of 2 reactive components - instead of 3. It nearly always results in a lower loaded circuit Q, and inherently lower circulating currents than other higher "Q" matching networks. Keeping the circulating currents to a minimum helps minimize the $I^2 \cdot R$ (power) losses. Component quality is important with most loss attributed to the inductor. Torroids coils can provide high unloaded "Q" when optimally designed, and have the added advantage of coupling little energy into the surrounding components and enclosure. This can be a problem with air-wound coils. The capacitors should have little loss if they use an air dielectric. Be on the lookout for anything that adds unintentional resistance in the tuner circuit.

A popular tuner used by a number of the list members is the Z-match. The QRP versions use a torroid coil, and a couple of polyethylene dielectric variable capacitors. It has the advantage of being suitable for matching balanced-line antennas without relying on a questionably effective balun transformer. The Norcal QRP club sells a neat little Z-match kit called the BLT for \$29. It is good for 40-meters and up (even though you only need a match on 40 meters). Frankly, I doubt if anyone is going to be able to hear a difference in your QRP signal whether you are using a \$29 BLT, or a kilowatt rated tuner.

Add some line and a BLT: You will then find the meaning of life, and the answer to your Cubs question.

Regards, Thomas - AC7A (Tucson)

Date: Fri, 28 Feb 2003 22:19:15 -0500
From: "cal.jsi" <cal.jsi@verizon.net>
To: "QRP-L" <qrp-l@lehigh.edu>
Subject: [146850] Re: OT: AEA KT-1 Keyer - Need Info.
Message-ID: <000301c2dfa1\$56cefe50\$fc53fea9@Sharon>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi all,

Just wanted to thank NM5M, WD8QWR and VE7DXJ for their very helpful responses to my inquiry! With luck, I have a PDF file containing the manual for the KT-1 coming as time permits.

As a humorous aside, I thought I'd bought an AEA CK-1 and didn't realize I had something different until I didn't see a slide switch on the side of the case of the KT-1. When I popped the case I saw that the PCB was totally different than the illustration in my CK-1 manual. Then I checked the eBay advertisement for what I'd bought and found out it was a different beast entirely, a KT-1.

72/73

Cal K4JSI

Date: Fri, 28 Feb 2003 19:36:11 -0800 (PST)
From: Ron Majewski <bigsky2000@sbcglobal.net>
To: qrp-l@lehigh.edu
Subject: [146851] FOX: W8RU Preliminary Log
Message-ID: <20030301033611.19116.qmail@web80211.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

Hello Everyone,

It was an evening filled with surprises for me. The first surprise came when I realized it was Thursday, it was 8:45pm local time, and -- most importantly -- I was the Fox! 15 minutes to go and I was utterly unprepared. It's amazing what you can do when you're forced to focus.

Everything was ready by 8:55pm. The next 5 minutes passed very slowly. This came in stark contrast to the first 30 minutes of the hunt.

Signals were strong and there were lots of them. The pile-up on the high side of my frequency got too thick to wade through so I jumped and picked up callers on the low side.

The next surprise came at 0230utc when the band changed and most everyone disappeared. The next hour and a half were challenging. Long periods with no callers and then signals would pop up out of the noise just long enough to make a QSO.

It was a blast, as always. It's great fun to hear familiar callsigns, make new friends, and hand out pelts. Sorry that so many of you came up empty handed. It's just as frustrating for me.

My preliminary log is attached below. Thanks for letting me be da Fox again this season and for all the fun.

72/3,

Ron (W8RU).

-- (W8RU Preliminary Log) -----

0201	W1UD	559			
0202	N4BP	559	FL	BOB	5W
0203	N4ROA	559	VA	DAN	5W
0203	K5JHP	559	TX	BILL	5W
0204	N1FN	559	CO	ET	5W
0204	N3BJ	599	VA	ALAN	5W
0205	N2WW	559	CO	LARRY	5W
0205	W0CH	559	MO	DAVE	5W
0206	K3ESE	559	MD	LLOYD	5W
0207	K0EVZ	579	ND	DOC	4W
0207	NQ7X	559	AZ	FLOYD	5W
0208	K0FRP	579	CO	AL	5W
0209	W2AGN	559	NJ	JOHN	5W
0210	W5YR	559	TX	GEORGE	5W
0211	K40AH	559	GA	GAREY	5W
0211	K5KW	579	OK	DON	5W
0212	K50I	559	OK	TIM	5W
0212	AC5JH	559	OK	TOM	5W
0213	KK5LD	559	TX	DAN	5W
0214	WB4X	559	NC	BRENT	5W
0215	AD6JV	559	VA	BILL	5W
0215	W7KXB	559	AZ	BILL	5W

0216	KQ5U	559	TX	TERRY	5W
0217	K5SR	559	TX	DALE	5W
0217	K4FB	559	FL	PAUL	5W
0218	NK6A	599	CA	DON	5W
0219	W5TB	559	TX	DOC	5W
0219	AG0T	559	ND	TODD	4W
0220	WA8NTA	559	CO	DICK	5W
0221	K4BYF	559	FL	JACK	3W
0222	W5XU	559	LA	DAVE	5W
0223	K4JPN	579	GA	STEVE	4W
0223	K5DW	559	TX	DON	5W
0224	N5ZE	559	TX	LEW	5W
0225	N00R	579	CO	JIM	4W
0226	KJ6CA	559	CA	BOB	5W
0227	W5USJ	559	TX	CHUCK	5W
0228	KB7WW	559	OR	ART	5W
0229	AJ4AY	559	AL	JAY	5W
0230	AE4TC	559	VA	SCOTT	5W
0233	K5ZTY	559	TX	BILL	5W
0235	K4TJD	559	GA	TOM	5W
0237	W5USJ	559	TX	CHUCK	5W
0238	AB5XQ	559	AR	BILL	5W
0238	NM5M	579	TX	ERIC	5W
0240	N9NE	559	WI	TODD	5W
0242	N5WL	559	OK	BART	5W
0246	WW7Y	559	UT	STEVE	5W
0247	W1IU	559	FL	JACK	5W
0249	W4YN	559	NC	TIM	5W
0249	N1TP	559	FL	TOM	5W
0250	VE6EX	559	AB	DAN	5W
0251	K4GT	559	GA	JIM	5W
0252	VE6KG	559	AB	NORM	5W
0253	K5EOA	559	LA	WAYNE	5W
0254	AA50	559	LA	VERN	5W
0255	K6MMC	559	CA	MIKE	5W
0256	W5KDJ	579	TX	WAYNE	250MW
0257	AC7A	559	AZ	TOM	5W
0258	W7MD	599	AZ	DAMON	5W
0259	AB9CA	559	AL	DAVE	5W
0300	W9UQB/7	559	AZ	MIKE	5W
0300	KK5NA	559	TX	JOE	5W
0303	N5YFC	559	LA	WAYNE	5W
0306	K5FSE	599	GA	JACK	5W
0306	N6LIF	559	TX	MARTIN	5W
0309	W5JAY	559	AR	JAY	1W
0316	KJ0C	229	MO	JIM	5W
0319	K5TCC	559	TX	DOC	5W
0323	KI0II	559	CO	RON	5W

0325	KI0RB	559	CO	VINCE	5W
0326	NK0E	559	CO	DAVE	5W
0328	WA8ZBT	559	TX	DENNIS	5W
0329	W0RSP	569	SD	ADE	2W
0331	KD5CMN	559	TX	MIKE	5W
0332	W2XN	559	FL	FRED	5W
0334	N5IB	559	LA	JIM	5W
0338	W9XU	559			
0346	AF4PS	579	FL	MAC	3W
0347	NN5E	559	TX	VERN	5W
0352	KR0U	599	CO	TIM	5W
0400	K5DI	FOX			
0400	W8RU	FOX			

Date: Fri, 28 Feb 2003 18:51:21 -0700
 From: "Dave WR50" <dendav@dzdn.com>
 To: "Flying Pigs" <fpqrp-1@mpna.com>, "QRPL" <qrp-1@lehigh.edu>
 Subject: [146852] FOX: Apology
 Message-ID: <001d01c2df95\$16b55960\$2d6357d1@dwinfield>
 MIME-Version: 1.0
 Content-Type: text/plain;
 charset="iso-8859-1"
 Content-Transfer-Encoding: 7bit

I am very sorry about missing my last shot at being the truffle...it seemed the harder I tried to escape, they kept finding me.

Unfortunately, my employer does not allow personal use of company e-mail accounts and I had no way of rounding up a replacement when it became obvious I wasn't going to make it. I'd like to thank Doc K0EVZ for stepping in and doing a better a job that I probably would have :-). Thanks, Doc!

Again, I offer my apologies.

72/73 es oo,

Dave Winfield, WR50
 El Paso, Texas DM61ts
 FP# -109, SOC #371, ARS #996,
 Zombie #793, QRPp #328, ARRL

Outgoing mail is certified Virus Free.

Checked by AVG anti-virus system (<http://www.grisoft.com>).

Version: 6.0.459 / Virus Database: 258 - Release Date: 2/25/03

Date: Fri, 28 Feb 2003 23:07:14 -0600

From: "Dan Reynolds" <bcdlr@insightbb.com>

To: "qrp-L Reflector \ (qrp-L Reflector\)" <qrp-l@Lehigh.EDU>

Subject: [146853] Transistor Cross Reference

Message-ID: <000001c2dfb0\$6cb059d0\$350da8c0@c1641599a>

MIME-Version: 1.0

Content-Type: text/plain;
charset="us-ascii"

Content-Transfer-Encoding: 7bit

What transistor cross references with a BC238? I know I've seen a cross reference some where but I'll be darned if I can find it. If needed circuit is at:

<http://www.icongrp.com/~sllewd/pcware.htm>

Bottom of page.

Dan KB9JLO

<><

Date: Fri, 28 Feb 2003 23:21:21 -0800

From: "Ian Wilson" <ianmwilson@earthlink.net>

To: <bcdlr@insightbb.com>,

"Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

Subject: [146854] Re: Transistor Cross Reference

Message-ID: <002501c2dfc3\$29bf12c0\$0b02a8c0@WorkGroup>

MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Looks a lot like a slower 2N3904 (NPN, 350mW, fT=120MHz):

<http://onsemi.com.cn/pub/Collateral/DataSheet/bc237rev1.pdf>

de ian, k3imw/6

----- Original Message -----

From: "Dan Reynolds" <bcdlr@insightbb.com>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Sent: Friday, February 28, 2003 9:07 PM
Subject: Transistor Cross Reference

> What transistor cross references with a BC238? I know I've seen a cross
> reference some where but I'll be darned if I can find it. If needed circuit
> is at:
> <http://www.icongrp.com/~sllewd/pcware.htm>
> Bottom of page.
>
> Dan KB9JL0
> <><
>

Date: Sat, 1 Mar 2003 02:22:19 +0000
From: ve3ab@mail.mondenet.com
To: qrp-1@lehigh.edu
Cc: wa2dgd@comcast.net
Subject: [146855] Re: Ant/Rig switching--2 antenna switches in SERIES..
Message-ID: <200303010729.h217TJ930604@barclay.mondenet.com>
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

I had mulitple rigs and multiple antennas and I used 2 identical
(bought used) Heathkit antenna switches ..in series..quite compact..
used a double male connector to hook them in series and it makes for
a compact installation. I then had two rigs and my auttek RF analyser
asgoing to the one switch (to select) the RF source to the
antenna..this goes to the second switch which selects the "load"
whether the load happens to be an antenna, antenna tuner(s) or dummy
load.

With the RF analyser as the source and the antenna tuner as the
load..I can adjust my swr and fiddle with the settings on my
transmatch as need be without causing qrm on the air and get the swr
right down to 1 to 1.

I suppose..if one didnt have an rf analyser..a cheaper alternative
would be a noise bridge.

I think this is a great way to handle this situation. Wish to heck I
had thought of it earlier!!! 73 Earl VE3AB

Date: Sat, 01 Mar 2003 02:15:27 -0700
From: Tim Groat <tcgroat@earthlink.net>
To: qrp-1@lehigh.edu, wkhibbert@juno.com
Subject: [146856] Re: Need Info On Iomega Power Supply
Message-ID: <5.1.1.6.2.20030301020625.00a0a350@mail.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

I just unplugged the wall-wart for my 100MB parallel port zip drive and looked at the label. It is Iomega P/N 02477800, model R4W005-100. Output is 5VDC at 1000mA. The center is +, and the outer sleeve is -.

All this is printed right on the label for the world to see. It beats me why they think it's "proprietary information".

72,

--Tim (KROU)

>wkhibbert@juno.com:

>

>I contacted Iomega today, trying to find out what the ratings for their
>wall wart power supply is and ran into a stone wall. They would not tell
>me the operating voltage, the required current or the plug's polarity.
>It's not a "user-servicable" part said one of the techs, and the Email
>response said that the "information requested is of a proprietary nature
>and may not be divulged except to Authorized Service organizations..."

Date: Sat, 01 Mar 2003 08:07:41 -0500
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-1@lehigh.edu
Subject: [146857] Re: Transistor Cross Reference
Message-ID: <5.1.1.6.1.20030301075617.00b1c0c0@postoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 11:07 PM 2/28/2003 -0600, you wrote:

>What transistor cross references with a BC238? I know I've seen a cross
>reference some where but I'll be darned if I can find it. If needed circuit
>is at:
><http://www.icongrp.com/~sllewd/pcware.htm>
>Bottom of page.

Dan,

That doesn't look like a very demanding application. I imagine a 2N3904, 2N2222, or other general purpose NPN transistor would do fine.

Dave

Dave Hinerman
WD8CIV@att.net

Date: Sat, 01 Mar 2003 08:39:30 -0500
From: Ed Tanton <n4xy@earthlink.net>
To: sergio@village-buzz.com,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [146858] Re: the qso kid!
Message-ID: <5.2.0.9.2.20030301083755.0231b4f0@pop.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

THIS is exactly why the Internet will NEVER replace Ham Radio-for me... and obviously: for Sergio!!! Way to go!

At 06:36 PM 2003-02-28, sergio wrote:

>i pulled that wire antenna out the window, and all around my house... it
>goes from the window, up to the rain gutter, and around two corners, and
>past the kitchen..
>
>i turned on, tuned up, and heard nc2b calling cq..
>
>i called back, and he heard me!
>
>we talked for a bit, then the wife came home.. and we had to head out..
>
>but i GOT IT!
>
>woo hoo..
>
>just to let you guys know, you're all next!
>
>thanks for all the counterpoise help!
>
>

>____
>peace,
>sergio
>www.village-buzz.com - "the village buzz"
>www.mp3.com/village_buzz - "the rock n roll, baby!"
>www.coffee-black.com - rock photo!
>phone ... 419 606 0557
>///snip

73 Ed Tanton N4XY <n4xy@earthlink.net>

Ed Tanton N4XY
189 Pioneer Trail
Marietta, GA 30068-3466

website: <http://www.n4xy.com>

All emails <IN> & <OUT> checked by
Norton AntiVirus with AutoProtect

LM: ARRL QCWA AMSAT & INDEXA;
SEDXC NCDXA GACW QRP-ARCI
OK-QRP QRP-L #758 K2 (FT) #00057

"Suppose you were an idiot ...
And suppose you were a member of
Congress... but I repeat myself."
--Mark Twain

Date: Sat, 01 Mar 2003 05:43:12 -0800
From: Ted Buckley <tedb@aracnet.com>
To: bcdlr@insightbb.com,
"Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [146859] Re: Transistor Cross Reference
Message-ID: <5.1.0.14.2.20030301054148.00a5b7e0@mail.aracnet.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 11:07 PM 2/28/03 -0600, Dan Reynolds wrote:

>What transistor cross references with a BC238? I know I've seen a cross
>reference some where but I'll be darned if I can find it. If needed circuit
>is at:

><http://www.icongrp.com/~sllewd/pcware.htm>
>Bottom of page.
>
>Dan KB9JL0
><><

NTE shows 28 listings for BC238, depending on suffix; most common seems to be the NTE123AP.

Ted WA7DFD

Date: Sat, 01 Mar 2003 08:50:10 -0500
From: "E. Roswell" <eroswell@monmouth.com>
To: qrp-1@Lehigh.EDU
Subject: [146860] Re: Transistor Cross Reference
Message-ID: <3E60BA92.8EBBCF5C@monmouth.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Looks like a 2N3906 would be right... see data sheet at:
<http://www.gensemi.com/pdfs/bc327.pdf>
Futurelec has the BC-328 for 10 cents each at:
<http://www.futurlec.com/Transistors/BC328pr.shtml>
73, Ed, K2MGM

Date: Sat, 01 Mar 2003 08:56:16 -0500
From: "Brice D. Hornback" <bdh@cyberbound.net>
To: qrp-1@Lehigh.EDU
Subject: [146861] TINY-TORNADO REV2d PCB *** NOW AVAILABLE ***
Message-ID: <009901c2dffa\$54758080\$6601a8c0@cst1tn01.in.comcast.net>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

HERE IT IS! VERY LIMITED QUANTITIES!

Tiny-Tornado REV2d PCB Special!
<http://www.qrpp-i.com/TT-PCB.htm>

Remember, this is a bare PCB. The detailed manual will be emailed to you in PDF format.

If you need them... XTALs, Low Pass Filter kits, toroids, and other parts too... are available on the QRPp-I web site on the "Kits & Parts" page, but to simply things will be considered a separate order.

Thank you all for your interest!

73/72/71! de Brice KA8MAV
<http://www.QRPp-I.com>

Date: Sat, 01 Mar 2003 09:05:37 -0500
From: Larry - WA2DGD <wa2dgd@comcast.net>
To: ve3ab@mail.mondenet.com, qrp-l@lehigh.edu
Subject: [146862] Re: Ant/Rig switching--2 antenna switches in SERIES..
Message-ID: <003001c2dffb\$a277a2d0\$6401a8c0@hamroom>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

Earl,

Thanks for your thoughts on the antenna switching. What you describe is what I am currently doing, except I put my SWR bridge in between the 2 switches, instead of a double male connector. This works great, but I can't use two different rigs with 2 different antennas at the same time. Seems like a patch panel is the easiest way to achieve this.

Take care Earl,

73

Larry

WA2DGD

K2 #1672

ARCI QRP #11215

NJ-QRP# 395

----- Original Message -----

From: <ve3ab@mail.mondenet.com>

To: <qrp-l@lehigh.edu>

Cc: <wa2dgd@comcast.net>

Sent: Friday, February 28, 2003 9:22 PM

Subject: Re: Ant/Rig switching--2 antenna switches in SERIES..

> I had mulitple rigs and multiple antennas and I used 2 identical
> (bought used) Heathkit antenna switches ..in series..quite compact..

> used a double male connector to hook them in series and it makes for
> a compact installation. I then had two rigs and my auttek RF analyser
> asgoing to the one switch (to select) the RF source to the
> antenna..this goes to the second switch which selects the "load"
> whether the load happens to be an antenna, antenna tuner(s) or dummy
> load.
> With the RF analyser as the source and the antenna tuner as the
> load..I can adjust my swr and fiddle with the settings on my
> transmatch as need be without causing qrm on the air and get the swr
> right down to 1 to 1.
> I suppose..if one didnt have an rf analyser..a cheaper alternative
> would be a noise bridge.
> I think this is a great way to handle this situation. Wish to heck I
> had thought of it earlier!!! 73 Earl VE3AB

Date: Sat, 01 Mar 2003 09:05:55 -0500
From: Ed Tanton <n4xy@earthlink.net>
To: bcdlr@insightbb.com,
 "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [146863] Re: Transistor Cross Reference
Message-ID: <5.2.0.9.2.20030301085403.03479f58@pop.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Hi Dan... The BC238B specs are: NPN; Ic(A): 0.1; Vceo(V):
25; Pd(W): 0.3; hfe: 240-500; fT(MHz): 150; Case: TO-92; PINOUT:
CBE . I'd say you could use almost ANY NPN if it had the gain. For example,
the 2N3904 ranges 100-300 as does the 2N4401. These values from an
Argentine Electronics Supply I stumbled on:
<<http://www.gmelectronica.com.ar/catalogo/pag113.html>> .You can also just
do cross-reference to NTE at:
<[http://nte01.nteinc.com/nte/NTERefSemiProd.nsf/\\$\\$Search?OpenForm](http://nte01.nteinc.com/nte/NTERefSemiProd.nsf/$$Search?OpenForm)> .

73 Ed Tanton N4XY <n4xy@earthlink.net>

Ed Tanton N4XY
189 Pioneer Trail
Marietta, GA 30068-3466

website: <http://www.n4xy.com>

All emails <IN> & <OUT> checked by
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LM: ARRL QCWA AMSAT & INDEXA;
SEDXC NCDXA GACW QRP-ARCI
OK-QRP QRP-L #758 K2 (FT) #00057

"Suppose you were an idiot ...
And suppose you were a member of
Congress... but I repeat myself."
--Mark Twain

Date: Sat, 1 Mar 2003 16:23:37 -0000
From: "Ray Goff" <radioham@gmx.co.uk>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [146864] Re: Transistor Cross Reference
Message-ID: <001c01c2e00e\$f5906480\$a9bc6751@starfishrcg>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi,

Looking at the circuit, I see that it is the interface to the Yaesu rigs for programming.

Not being willing to mess about with lots of transistors, I put the an interface together with a MAX232 and a 7417 TTL buffer chip. I was able to programme my rig successfully after I realised that it is important to link pins 7 and 8 and also pins 4 and 6 on the 9 way connector even if you do not use these pins for power.

If anybody is interested in the schematic, let me know and I will draw it up and distribute it.

73

Ray, G4FON

Date: Sat, 01 Mar 2003 09:46:16 -0700
From: "James R. Duffey" <JamesDuffey@comcast.net>
To: qrp-1@lehigh.edu, nfooster@bluefinrobotics.com
Subject: [146865] Re: matching dipoles and ladder line
Message-ID: <BA8631E8.2869%JamesDuffey@comcast.net>
MIME-version: 1.0
Content-type: text/plain; charset=ISO-8859-1
Content-transfer-encoding: quoted-printable

Nick - You have several choices.

1. You can probably tune the antenna/feed line system the way it is with most tuners, even with the high impedance. If you are purchasing or building a tuner, a Z-match such as NorCal's BLT, or EmTech's ZM-2 should be fine. You can scratch build a Z-match as well, check Charlie "tuner" Lofgren's articles in Antenna Compendiums 3 and 5. He has single band versions available as well. I think that EmTech sells the dual section capacitors required for the Z-match.

2. You can match the antenna to the 300 Ohm feeder with a T match or delta match at the tuner. The line will then operate at an SWR of 1:1 in this case, and be easy to match. The handbook or antenna book will show you how to do this.

3. You can add a length of 300 Ohm feeder to get to a lower impedance. If you make the feeder a half wave long (remember the velocity factor), then the impedance at the transmitter end will be the same as the impedance at the antenna end. You need to deal with the extra length of feeder, but that can be done by suspending it from the eaves outside or ceiling of the shack inside. Since you are not interested in multi band operation, this is a good solution. To see how you can make a tuner out of changing lengths of feed line, see:

<<http://www.qsl.net/w5dxdp/notuner.htm>>

Somebody earlier alluded to this site, but omitted the URL.

4. You can replace the 300 Ohm ladder line with a coaxial feeder. There is not much advantage in using balanced line on resonant antennas for single band operation, particularly on the lower bands. Your 300 Ohm feed line has a matched loss of about 0.1 dB at 7 MHz. With a 30 Ohm input impedance you will have a 15:1 SWR, which will raise the line loss to about 0.5 dB. This is not much to worry about. RG-58 will have a matched line loss of 0.45 dB at 7 MHz, and the increased loss due to the 1.7:1 SWR will be less than 0.1 dB. So there isn't anything to be gained loss-wise by going to balanced feeders from coax. The NorCal-40 will probably feed the coax directly

without a tuner. Now if you plan multi band operation in the future, the balanced feeder will be a good idea, but you do need to add the cost of a tuner to the system.

5. As you are discovering, the antenna and feed line must be considered as a system. You can find various combinations of antenna lengths and feeder lengths that will give you low resistive feed points. The 44 ft dipole fed with 22 ft of feeder is one such example, as is the 88 ft with 44 ft feeders. Other combinations are also possible, you just need to play around with an antenna modeling program like EZNEC and a transmission line program as in the HAMCALC pack or a Smith Chart. I recall that a 40 M dipole 66 ft long, fed with about 90 ft of feeder will give a reasonably low primarily resistive impedance at most bands from 40 M up.

I realize that not all of these suggestions are feasible in your situation, but you at least one or two should be, and you can keep the others in your back pocket for future use.

Let us know what you end up doing. - Dr. Megacycle KK6MC/5
=20

James R. Duffey KK6MC/5
Cedar Crest NM 87009 DM65

Date: Sat, 1 Mar 2003 11:51:16 -0500
From: "John J. McDonough" <wb8rcr@arrl.net>
To: <radioham@gmx.co.uk>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [146866] Re: Transistor Cross Reference
Message-ID: <009d01c2e012\$c79a3340\$010044c0@chartermi.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Ray

I did something similar for my Icom which uses almost the same scheme as the Yaesu. One thing I found helpful was to use some of the spare gates from the 7417 to drive some LEDs so I could tell what was going on. I have a red LED for RTS which lights when I start the logging program, a green one for the computer data, and a yellow one for the radio data. This has been real helpful for debugging etc.

72/73 de WB8RCR <http://www.qsl.net/wb8rcr>
didileydadidah QRP-L #1446 Code Warriors #35

----- Original Message -----

From: "Ray Goff" <radioham@gmx.co.uk>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Saturday, March 01, 2003 11:23 AM
Subject: Re: Transistor Cross Reference

> Hi,
>
> Looking at the circuit, I see that it is the interface to the Yaesu rigs
for
> programming.
>
> Not being willing to mess about with lots of transistors, I put the an
> interface together with a MAX232 and a 7417 TTL buffer chip. I was able to
> programme my rig successfully after I realised that it is important to
link
> pins 7 and 8 and also pins 4 and 6 on the 9 way connector even if you do
not
> use these pins for power.
>
> If anybody is interested in the schematic, let me know and I will draw it
up
> and distribute it.
>
> 73
>
> Ray, G4FON
>
>
>

Date: Sat, 01 Mar 2003 17:12:14 +0000
From: k4vib@att.net
To: qrp-l@lehigh.edu
Subject: [146867] How to Use Ceramic Resonator
Message-ID: <200303011712.h21HCLfT025086@rain.CC.Lehigh.EDU>

I've got a 10Mhz ceramic resonator from Murata. It's got 3 legs. Can I use
this resonator as a crystal (in an oscillator) or is it a filter? What are the
pinouts (is the middle leg for pulling the frequency)?

Thanks,

Bill
K4VIB

Date: Sat, 1 Mar 2003 10:55:05 -0700
From: "bob baxter" <rbaxter@cybertrails.com>
To: "QRP-L" <qrp-l@Lehigh.EDU>
Subject: [146868] FS Bencher Paddles
Message-ID: <000d01c2e01b\$b2bf1040\$1e562aa2@bobbaxte>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

These are older (12 years) Benchers on a black base in good condition.
They are wired to an 1/8" stereo plug and have an interface to key a K2
from your computer.
\$40 + shipping.

Bob Baxter AA7EQ
Bisbee, Az.

Date: Sat, 1 Mar 2003 18:36:52 -0000
From: "Leon Heller" <leon_heller@hotmail.com>
To: <k4vib@att.net>,
 "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [146869] Re: How to Use Ceramic Resonator
Message-ID: <DAV2270N105PPqkg2Sk0002030b@hotmail.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

----- Original Message -----

From: <k4vib@att.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Saturday, March 01, 2003 5:12 PM
Subject: How to Use Ceramic Resonator

> I've got a 10Mhz ceramic resonator from Murata. It's got 3 legs. Can I

use

> this resonator as a crystal (in an oscillator) or is it a filter? What are the

> pinouts (is the middle leg for pulling the frequency)?

Bill,

You could use it in an oscillator. It's probably intended to be used with a Pierce-type oscillator in a uC. The centre pin is grounded, and the other pins go to the input and output of the oscillator circuit.

The internal configuration is like this:

```
in  ----Res----out
      C              C
      ----- Gnd
```

Cs are probably something like 30 pF.

It should work with a PIC or AVR.

You might be able to pull it with a trimmer in parallel with one of the internal Cs.

73, Leon

--

Leon Heller, G1HSM

leon_heller@hotmail.com

http://www.geocities.com/leon_heller

Date: Sat, 01 Mar 2003 10:42:14 PST

From: James R Giammanco <n5ib@juno.com>

To: qrp-1@Lehigh.edu

Subject: [146870] HB - DIP pads for Manhattan

Message-ID: <20020301.123445.7495.0.n5ib@juno.com>

I've been using the K7Q0 miter box device and an Exacto hobby saw to cut pads for DIP devices. The Exacto saw is very fine toothed and makes a very precise, fine kerf. The problem is that the blades apparently are not hardened and the glass fiber material rapidly dulls the blade after only a few cuts.

Today I was at Harbor Freight picking up some bar clamps, so for \$0.99 I added a #P5942 mini hacksaw to the pile.

Back at the shack I cut another kerf into the K7Q0 miter box to accomodate the new blade and tried out the saw on a piece of copper clad. It works really great.

The blade is a bit wider than the hobby saw, cutting about an 0.032" kerf. With the blade installed to cut on the "draw" stroke it only takes four or five gentle strokes to cut through the copper cladding and into the substrate. The blade seems to be hardened somewhat more, and doesn't seem to dull quickly.

For parts with pins on 0.100" centers the 0.032" kerf will leave 0.068" pads, just about ideal. You might even be able to handle 0.050" SMT parts, as the pad would be about 0.018"

72

Jim N5IB

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Date: Sat, 01 Mar 2003 13:44:26 -0500
From: Ed Tanton <n4xy@earthlink.net>
To: k4vib@att.net,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [146871] Re: How to Use Ceramic Resonator
Message-ID: <5.2.0.9.2.20030301134342.0231b578@pop.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

It can be used as a crystal Bill... but is somewhat less stable (but not drastically so) than the real thing. As for the pinout, with the leads down, and you facing the front of the part, it is IN-GND-OUT. See:
<http://search.murata.co.jp/Ceramy/owa/CATALOG.showpage?sPath=/image/A07X/4069CSTR.GIF&sHinnmTmp=CSTLS_X&sLang=2&sCapt=Basic_Oscillation_Circuit&nPage=1&nPageNum=1>

.

73 Ed Tanton N4XY <n4xy@earthlink.net>

Ed Tanton N4XY
189 Pioneer Trail

Marietta, GA 30068-3466

website: <http://www.n4xy.com>

All emails <IN> & <OUT> checked by
Norton AntiVirus with AutoProtect

LM: ARRL QCWA AMSAT & INDEXA;
SEDXC NCDXA GACW QRP-ARCI
OK-QRP QRP-L #758 K2 (FT) #00057

"Suppose you were an idiot ...
And suppose you were a member of
Congress... but I repeat myself."
--Mark Twain

Date: Sat, 01 Mar 2003 13:54:56 -0500
From: T + J Williams <wa0eir@comcast.net>
To: debian-hams@lists.debian.org, linux-hams@vger.kernel.org,
psk31@bipt106.bi.ehu.es, qrp-1@Lehigh.EDU
Subject: [146872] twclock and twlog
Message-ID: <001c01c2e024\$0d531b70\$6401a8c0@adubn1.nj.home.com>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

Hi,

I am updating all of the tw programs. There are now statically linked
versions for twclock and twlog. You just untar and install - no need to
download libraries or compile.

If want to compile your own, the makefiles will handle LessTif and
openMotif. When compiling with LessTif, some additional code is
included in the programs to make things work with LessTif.

You can find everything at <http://wa0eir.ham.org>

73,
Ted - wa0eir

Date: Sat, 1 Mar 2003 12:18:35 -0700
From: "bob baxter" <rbaxter@cybertrails.com>
To: "QRP-L" <qrp-l@Lehigh.EDU>
Subject: [146873] Re; FS Bencher paddes
Message-ID: <008401c2e027\$5e33e1c0\$1e562aa2@bobbaxte>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

The paddles are sold.

Bob Baxter AA7EQ
Bisbee, Az.

Date: Sat, 01 Mar 2003 13:23:16 -0500
From: Steven Weber <kd1jv@moose.ncia.net>
To: k4vib@att.net
Cc: qrp-l@lehigh.edu
Subject: [146874] Re: How to Use Ceramic Resonator
Message-ID: <3.0.6.32.20030301132316.007bbde0@mailhost.ncia.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

>I've got a 10Mhz ceramic resonator from Murata. It's got 3 legs. Can I use
>this resonator as a crystal (in an oscillator) or is is a filter? What
are the
>pinouts (is the middle leg for pulling the frequency)?
>
Bill,

The middle pin is ground. Typicly, these are placed across a inverter gate
to form an oscillator. (a resistor maybe needed across the resonator also,
unless it's built in, like the oscillator pins of a CPU chip) There are two
capacitors built in the package, one on each of the end pins to the center
ground pin.

Not too sure how well a resonator would work as a filter, though they are
similer.

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire

<http://www.qsl.net/kd1jv/>

Date: Sat, 1 Mar 2003 13:50:59 -0600
From: Wayne Rogers <w5kdj@juno.com>
To: qrp-1@lehigh.EDU
Subject: [146875] For Sale
Message-ID: <20030301.135059.-1986415.0.w5kdj@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

7 & 14mhz Rockmite still in original packages. Each w/Jackson Harbor
Press RMK keyer chip & KD1JV audio filter board.

\$45 each postage included.

Wayne _ W5KDJ
NW Houston
SVOWWW _ TF2WJN
ARCI_11325 * ARS_1392 * SOC_538

Date: Fri, 28 Feb 2003 19:48:16 -0600
From: Nick Kennedy <nkennedy@tcainternet.com>
To: "'nfoster@bluefinrobotics.com'" <nfoster@bluefinrobotics.com>,
"Low Power Amateur Radio Discussion (E-mail)" <qrp-1@Lehigh.EDU>
Subject: [146876] RE: matching dipoles and ladder line
Message-ID: <01C2DFFA.04107280.nkennedy@tcainternet.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit

Hi Nick (your name tells me you're a smart fellow)--

Yep, you picked a pretty bad length of feedline. Just a few more feet and
your inductive reactance goes thru zero and screaming off in the opposite
direction.

Anyway ... W5DXP (the guy with the no-tuner all band antenna) has some
BASIC code on his page that tells where to feed a dipole of length you
specify to get the lowest SWR. I translated that to Excel and use it
sometimes. Assuming a standard 66 feet or so dipole that you want to feed
with 300 ohm twin lead, your first optimum length is 28.25 feet. If that
doesn't reach, the next is 84.5 feet and the next is 140.7 feet.

W5DXP's stuff may be found at <http://www.qsl.net/w5dxd/notuner.htm> .

When you get the line length just right, you probably won't need a tuner at all. But if you want to build one anyway for the fun and learning experience, great! Another web resource I recommend is Reg Edwards' programs. You'll probably find something there that will give you some tuner component values. DIPOLE3.EXE looks especially good for you. But check out those on T Tuner and L Tuner also.

Find Reg's site at <http://www.btinternet.com/~g4fgq.regp/>

>Am I going to have to alter my feedline length for a lower
>impedance, or will it matter at all to the tuner?

Usually won't matter, unless you've chosen an especially bad "random" length, but you may have done that here.

>And what tuner architecture do you recommend?

Not sure--probably C-L-C

>Will I need a 4:1 balun?

Nah.

>Will the Cubs ever win the Series?

Answer hazy ... try again later.

>What is the meaning of life?

What? It's supposed to have a meaning? Why doesn't anybody tell me these things!

72 & have fun with it--

Nick, WA5BDU
in Arkansas

Date: Sat, 1 Mar 2003 20:12:30 -0000
From: "Kenneth Evans" <w4du@attbi.com>

To: "QRP-1" <qrp-1@lehigh.edu>
Subject: [146877] Address for Rich Arland - K7SZ
Message-ID: <008f01c2e02e\$e56341c0\$6601a8c0@se1.client2.attbi.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Rich,

Trying to get some data to you, but the addresses I have fail. Please let me know your current address. Sorry for the BW.

72/3,
Ken W4DU
w4du@arrl.net
QRP ARCI #696, GQRP, NOGA, FP #295, NORCAL, ARRL-Life

Date: Sat, 1 Mar 2003 15:29:45 -0600
From: "Michael Melland" <w9wis@charter.net>
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [146878] RF Coaxial Grounding Scheme ?
Message-ID: <000501c2e039\$ae002d00\$3f20be42@computer>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Forgive my ignorance but.... here's one I never heard of.

A just found an article that apparently appeared in the September 1996 issue of 73. The article has information on RF grounding to prevent RFI from feedline or your ground system radiating. The author was a Terry Staudt, WOWUZ...

He proposes utilizing what he terms a "coaxial ground" that consists of a length of coax (any length... length not critical according to the article) with the braid and center conductor joined on each end through a .001 uF ceramic cap. You then crimp rings on the center conductor on each end and attach one end to the ground of the transceiver and the other to a ground rod outside after waterproofing that end.

The claim is that it will eliminate all RF grounding problems like loops and

radiating grounds and RF on the antenna braid the author also states that one should never chain transceiver, tuner, amp etc together to a single ground at the tuner like usually recommended...but rather attach only this single coaxial ground to the transceiver....

Any comments ? Does this really work ? If so what's the theory behind it ? There was a long line of hams that wrote in praising this RF grounding method.... ? I never heard of this before but an OT down the street said they used to do this "years ago". Anyone ever test this out ?

--

Michael Melland, W9WIS
Winneconne, Wisconsin USA EN54pc
qrp-l #1656 - qrparci # 9875 - iparc #252
ars #1075 - <http://webpages.charter.net/w9wis/>

Date: Sat, 01 Mar 2003 17:13:03 -0500
From: "E. Roswell" <eroswell@monmouth.com>
To: qrp-l@Lehigh.EDU
Subject: [146879] Re: Transistor Cross Reference
Message-ID: <3E61306F.D388F0D1@monmouth.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Oops! Got BC 238 confused with BC 328...

End of QRP-L Digest 2846

